

## Operating Instructions

Video Cassette Recorder

# NV-SD250 Series

**G-CODE**



**SUPER DRIVE Ai**  
INTELLIGENT CONTROL SYSTEM

Before attempting to connect, operate or adjust this product, please read these instructions completely.

VQT6148

# Dear Customer

May we take this opportunity to thank you for purchasing this Panasonic Video Cassette Recorder.

We would particularly advise that you carefully study the Operating Instructions before attempting to operate the unit and that you note the listed precautions.

## G-Code Programming System

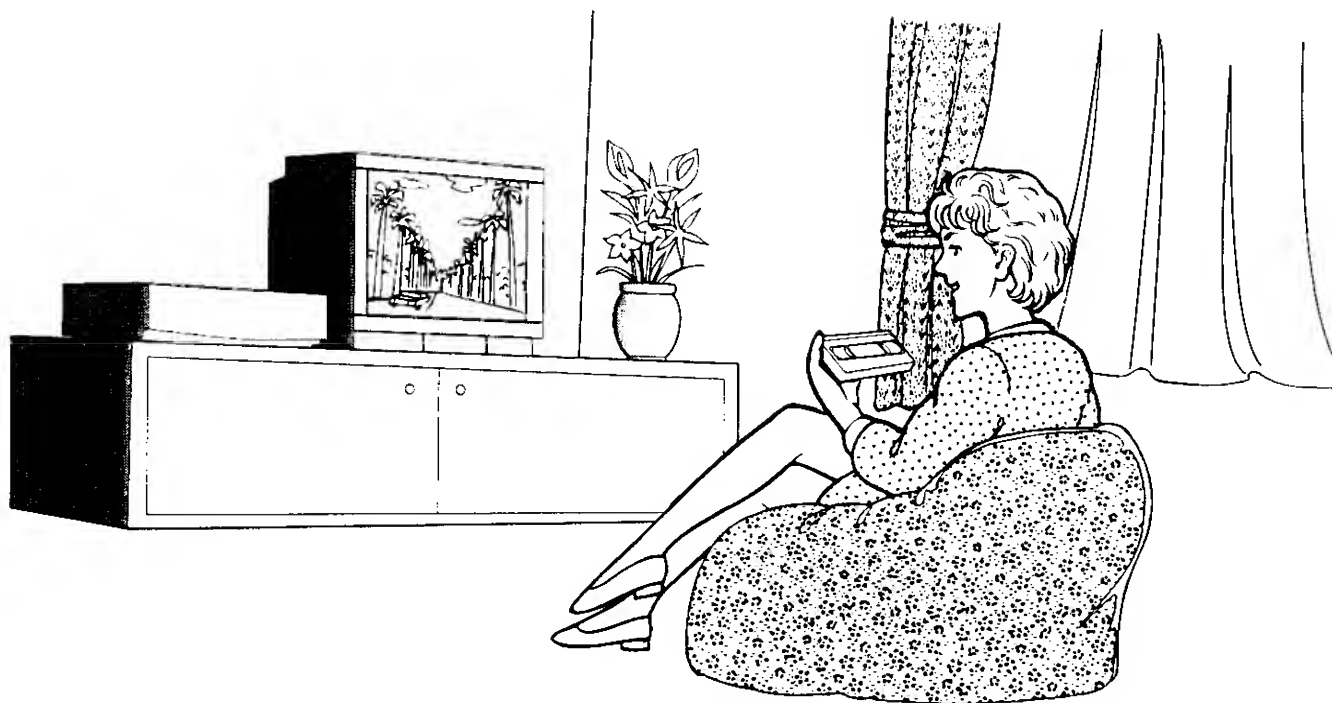
Programming is now easier than ever: simply enter the G-Code number provided in the programme schedule column carried by newspapers and magazines.

- G-Code is a trademark applied for by Gemstar Development Corp. G-Code system is manufactured under licence from Gemstar Development Corporation.

## AI Crystal View Control

AI circuit for optimizing of playback characteristics. playback characteristics.

During playback the contrast of tapes recorded with good level is automatically optimized.



# Contents

**Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.**

**TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.**

NV-SD250EA: New Zealand model

■ DO NOT REMOVE OUTER COVER.

To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

Video recorders carrying the HQ symbol mark feature the new VHS High Quality Picture System. This system assures complete compatibility with VTRs that use the conventional VHS system.

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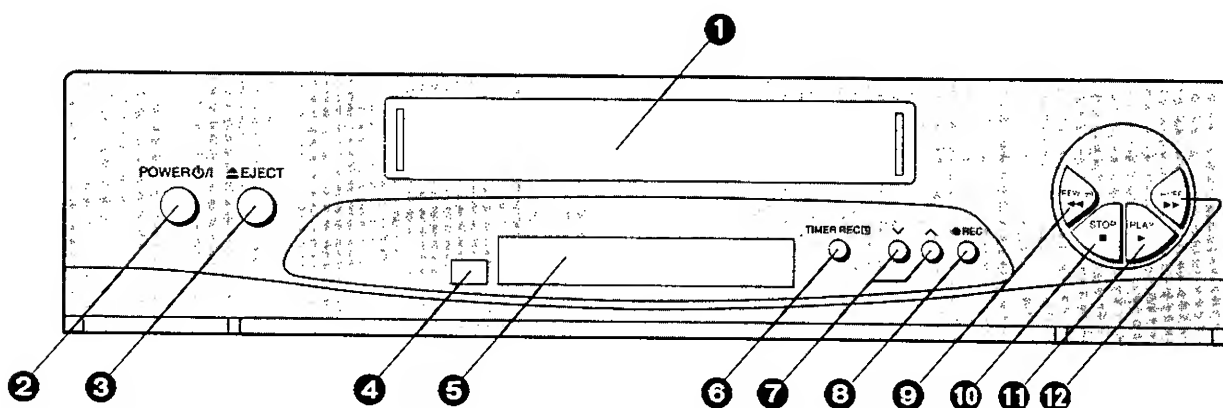
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# Controls and Connection Sockets

This gives a detailed explanation of the function of each button, switch and connection socket.



## 1 Cassette Compartment

Insert a video cassette here.

## 2 POWER

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still connected to the mains.

## 3 EJECT


To eject a video cassette.

## 4 Infra-red Remote Control Receiver Window

## 5 Display

## 6 TIMER REC

To turn the timer recording function on and off.

 is lit or not lit.

Once operating timer recording function, the normal VTR operation is not possible unless this button is set to off.

## 7

To select the required programme position (TV station).

## 8 REC

To start a recording.

## 9 REW (REWIND)

In the stop mode: To rewind the tape

In the playback mode: To search backward

In the rewind mode: To obtain high speed picture  
"◀◀" is lit.

## 10 STOP

To stop any playback or recording.

## 11 PLAY

To start playback. "▶" is lit.

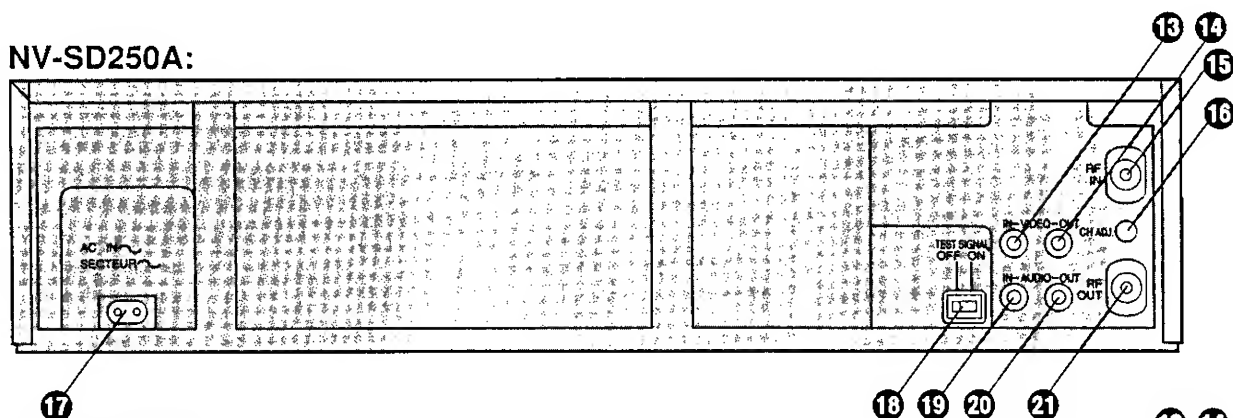
## 12 FF (FAST FORWARD)

In the stop mode: To fast forward the tape

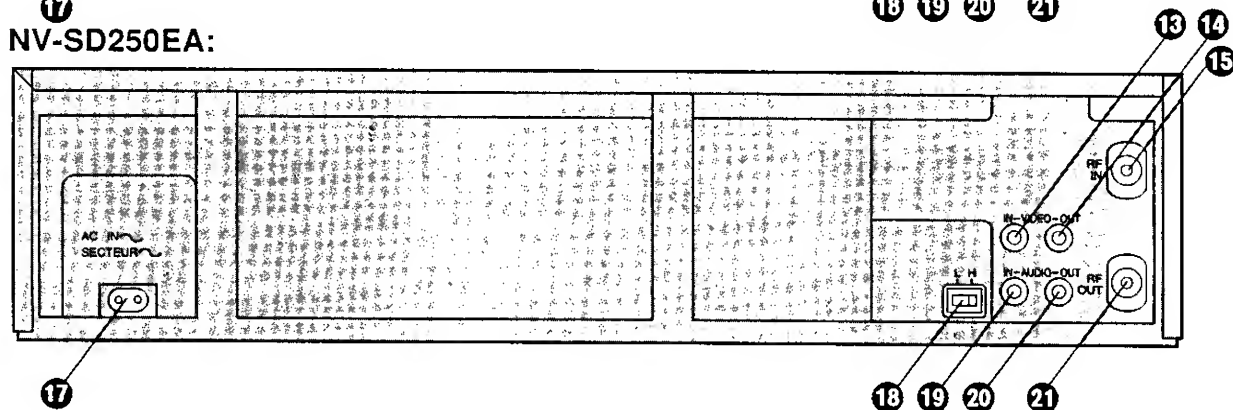
In the playback mode: To search forward

In the fast forward mode: To obtain high speed picture  
"▶▶" is lit.

NV-SD250A:

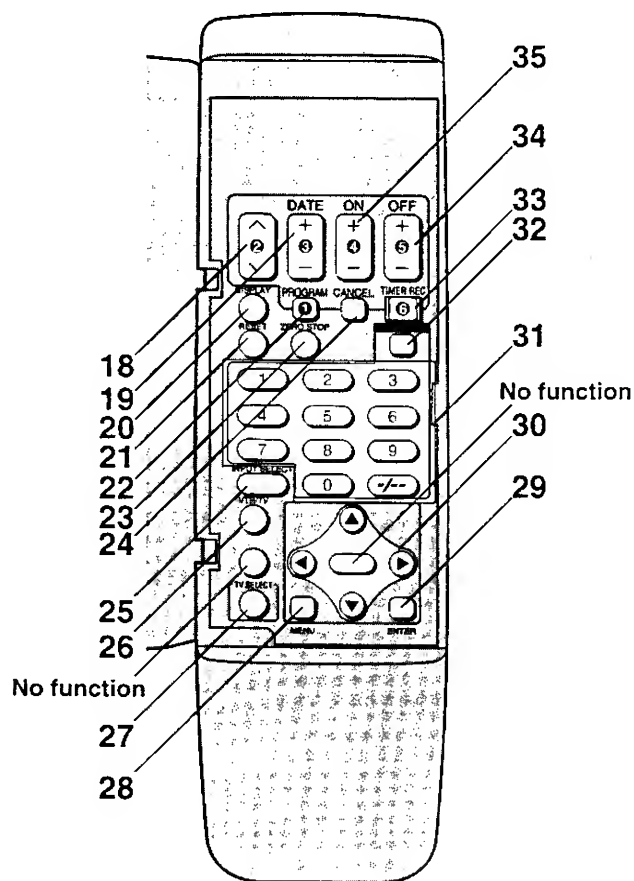
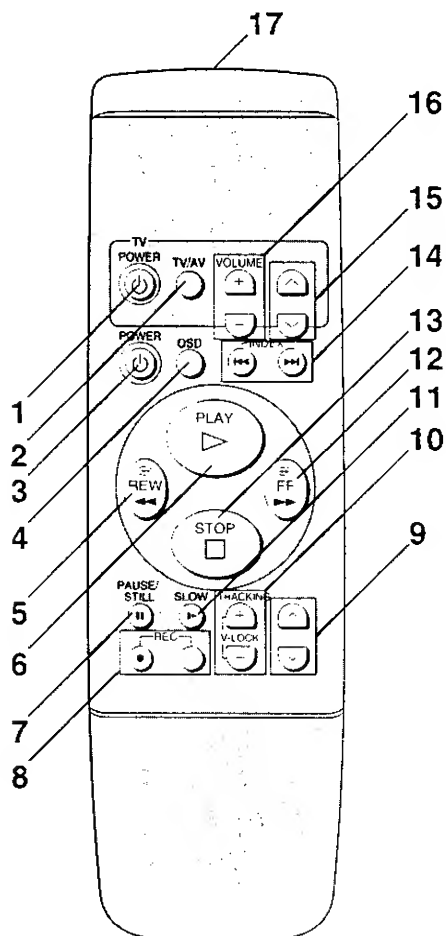


NV-SD250EA:



- 13 VIDEO IN**  
To connect a video cable to a Movie Camera or another video recorder.
- 14 VIDEO OUT**  
To connect a video cable to a TV or another video recorder.
- 15 RF IN**  
To connect to the external aerial.
- 16 CH ADJ.**  
To adjust the RF transmitting channel 31–43.  
(Only for NV-SD250A.)
- 17 AC IN~**  
To connect to the main power supply.
- 18 NV-SD250A: TEST SIGNAL**  
The test signal is transmitted on channel 37.
- NV-SD250EA: Video Playback Channel Selector**  
To select the video playback channel.
- 19 AUDIO IN**  
To connect an audio cable to a Movie Camera or another video recorder.
- 20 AUDIO OUT**  
To connect an audio cable to a TV or another video recorder.
- 21 RF OUT**  
To connect to the aerial terminal on a TV set.

# Infra-red Remote Controller



## 1 POWER (TV)

To switch the TV from on to standby mode or vice versa. In standby mode, the TV is still connected to the mains.

- With some TV models, it may only be possible to switch the TV to standby mode using this button. In this case, use TV/AV or  $\vee \wedge$  (TV) to switch the TV on.

## 2 TV/AV

To select the TV input.

## 3 POWER (VTR)

To switch the VTR from on to standby mode or vice versa. In standby mode, the VTR is still connected to the mains.

## 4 OSD

For the On Screen Display Function.

## 5 REW (REWIND)

In the stop mode: To rewind the tape  
In the playback mode: To search backward  
In the rewind mode: To obtain high speed picture  
“<<<” is lit.

## 6 PLAY

To start playback. “>>>” is lit.

## 7 PAUSE/STILL

During playback: Still picture.  
During recording: To interrupt recording.

## 8 REC

To start a recording.  
• Press both buttons simultaneously.

## 9 $\vee \wedge$ (VTR)

To select the required programme position (TV station) of the VTR.

## 10 TRACKING/V-LOCK

For manual tracking adjustment  
The + and - buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment  
When noise bars appear during Still or Slow playback, switch over to slow playback and adjust with the + or - Button to reduce the noise bars.

For vertical locking adjustment  
Use the + and - buttons to minimize any vertical jitter during still-picture playback.

# 11 SLOW

For the slow motion playback function. "◀▶" is lit.

# 12 FF (FAST FORWARD)

In the stop mode: To fast forward the tape  
In the playback mode: To search forward  
In the fast forward mode: To obtain high speed picture  
"▶▶" is lit.

# 13 STOP

To stop any playback or recording.

# 14 INDEX

For the index search function.

# 15 ∨ ∧ (TV)

To select the required programme position (TV station) of the TV.

# 16 VOLUME

To adjust the volume of the TV.

# 17 Infra-red Transmitter

# 18 ∨ ∧

To programme a timer recording.

# 19 DATE

To programme a timer recording.

# 20 DISPLAY

To change the indication on the VTR Display.

→Clock→Counter →

# 21 RESET

To reset the tape counter (elapsed time) to "0:00.00".  
•The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

# 22 PROGRAM

To set and check timer programmes.

# 23 ZERO STOP

For the zero stop function.

# 24 CANCEL

To cancel the settings made for a timer recording.

# 25 INPUT SELECT

To select the "AV" external recording source.

# 26 VTR/TV

NV-SD250A: No function.

NV-SD250EA: To select the VTR mode or TV mode.

# 27 TV SELECT

To set the remote controller for operation of the TV.

# 28 MENU

To make OSD menu appear on the TV screen.

# 29 ENTER

To make selections from On Screen Display.

# 30 ▲ ▼ ◀ ▶

To make selections from On Screen Display.

# 31 Programme Position Selector Buttons

•To select the programme positions (1-99).

9: 9

19: -/-- → 1 → 9

•To programme a G-Code number.

# 32 G-Code

For the G-Code programming.

# 33 TIMER REC

To turn the timer recording function on and off.

◻ is lit or not lit.

Once operating timer recording function, the normal VTR operation is not possible unless this button is set to off.

# 34 OFF

To programme a timer recording.

# 35 ON

To programme a timer recording.

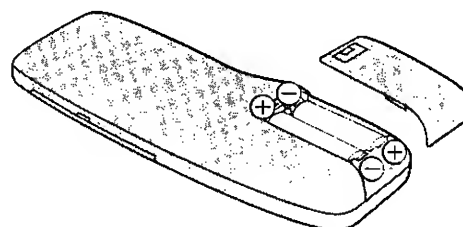
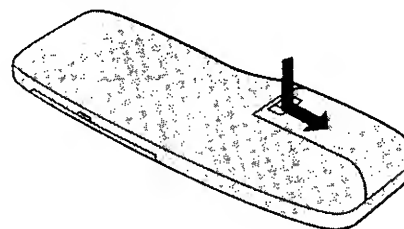
## Power Source for the Remote Controller

The remote controller is powered by 2 "AA", "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

## Precautions for Battery Replacement

- Load the new batteries with their polarity (⊕ and ⊖) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

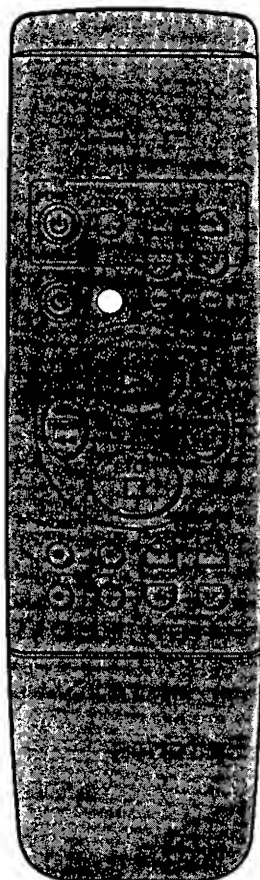
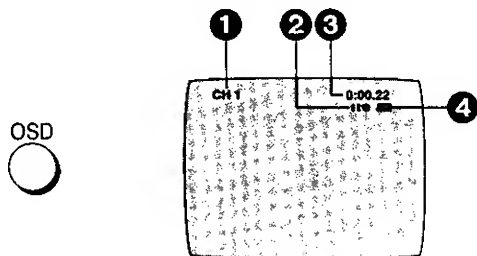
## Installing the Batteries



# On Screen Display

Press **OSD** to make the On Screen Display appear on the TV screen.

- To make this display disappear, press **OSD** again.



- 1 Programme position
- 2 Tape running display

Stop, Eject	
Rewind, Review	◀◀
Fast Forward, Cue	▶▶
Playback	▶
Still Playback	⏮
Recording	●
Recording Pause	⏮●
Slow Playback	⏭

- 3 Present time/Tape counter

Information	Display
Present time	17:24
Tape counter	-2:35.47
Dew*	DEW
Index search	S 01

\*Only for NV-SD250A.

- 4 Cassette-in indicator

**Note:**

On Screen Display may be disturbed or disappear during special playback.



# Connections

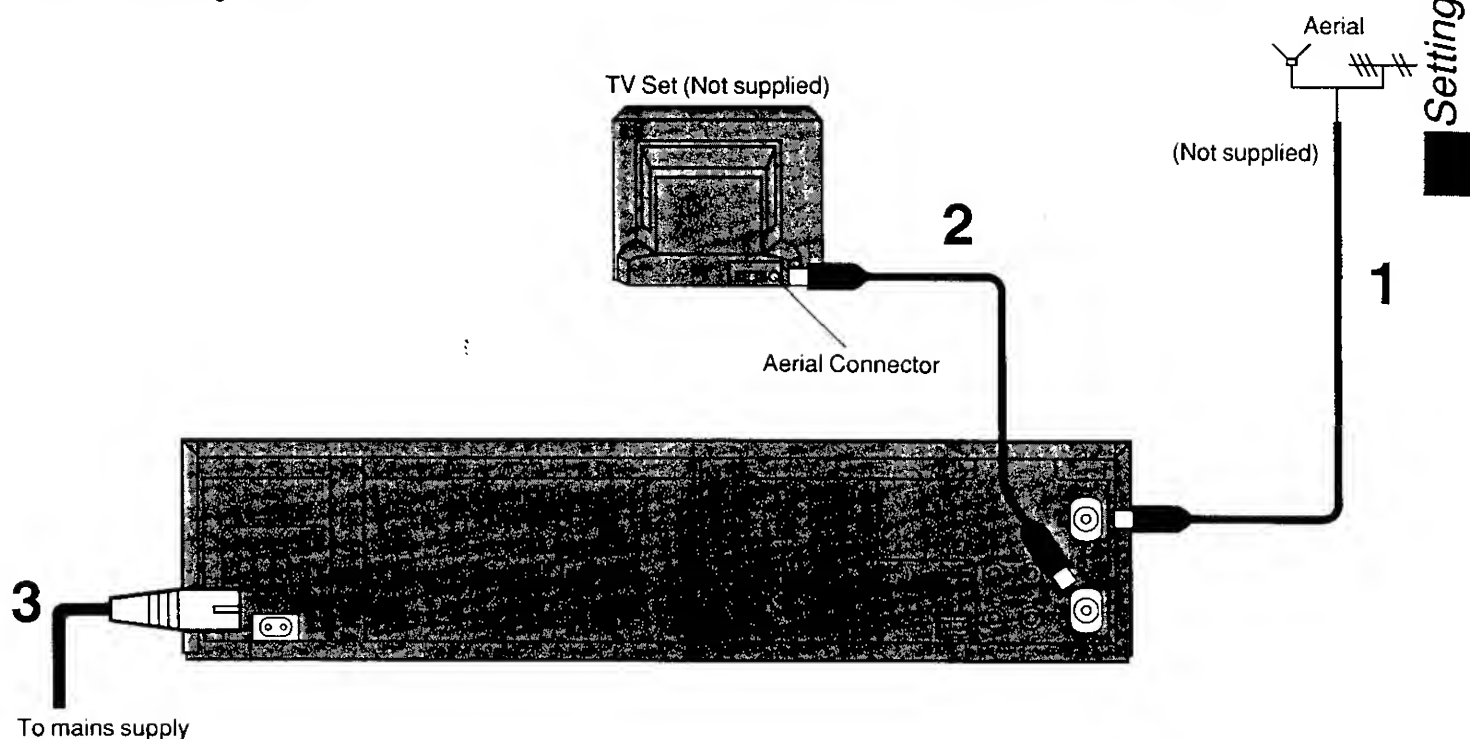
On Screen Display  
Connections

This tells you how to connect with an aerial, TV, etc.

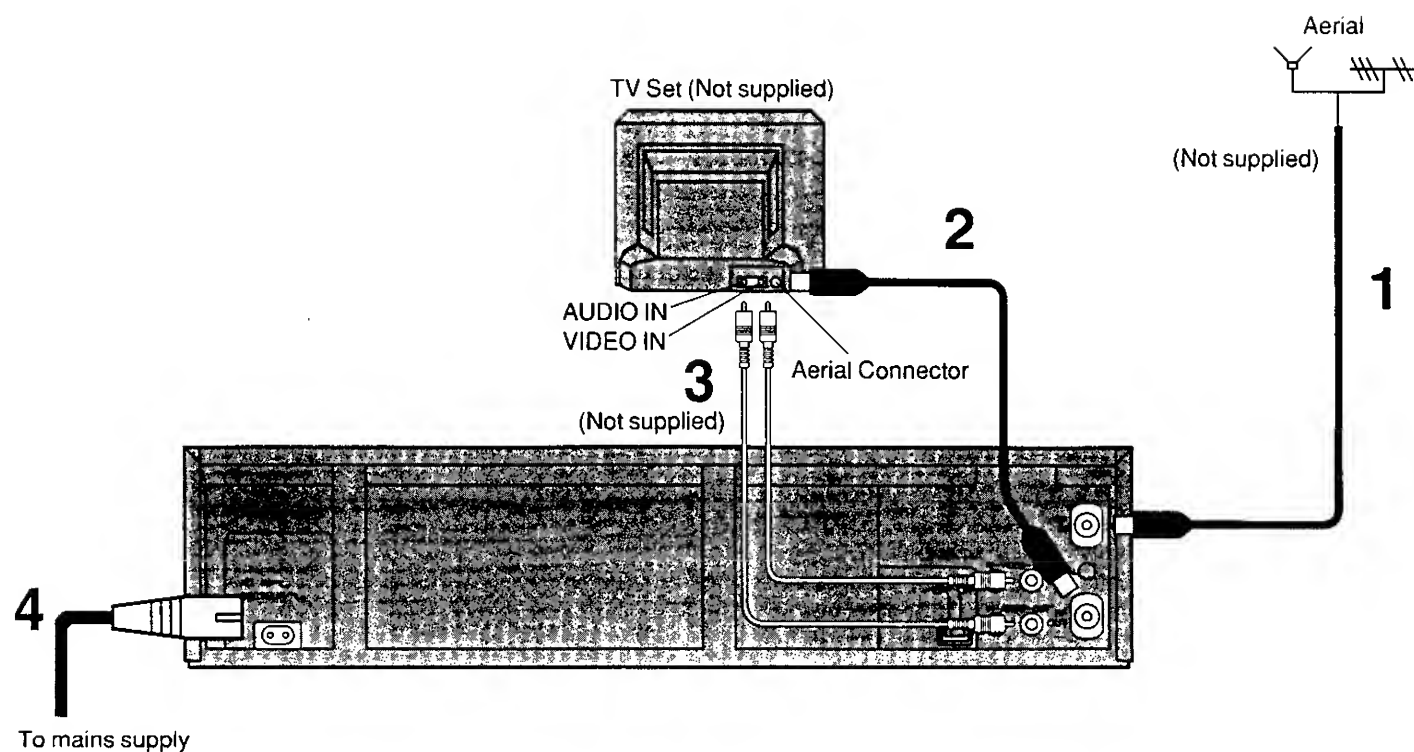
## Basic Connections

The following connections are required to record and play back the VTR through TV set:

**NV-SD250A:**  
**FOR YOUR SAFETY**  
Install any external aerial to AS 1417.1.

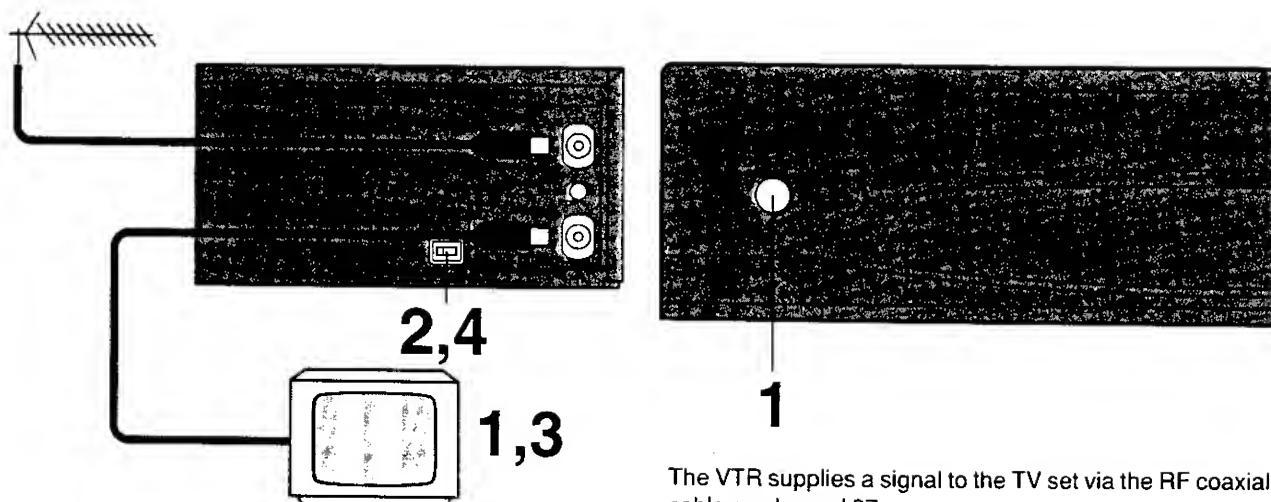


## Connection to a TV Set with the Audio/Video Input Sockets



# Tuning the TV to your VTR

## : NV-SD250A



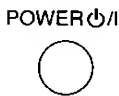
The VTR supplies a signal to the TV set via the RF coaxial cable on channel 37.

It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.


If you have connected the VTR to the TV through the video and audio input sockets then you do not need to follow the procedure mentioned below.

### Operations

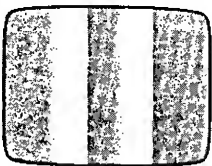
- 1**




Turn on the TV and VTR.
- 2**



To generate a test pattern, set **TEST SIGNAL** to ON.
- 3**



Set the TV to an unused position which you wish to use for your video playback.
- 4**



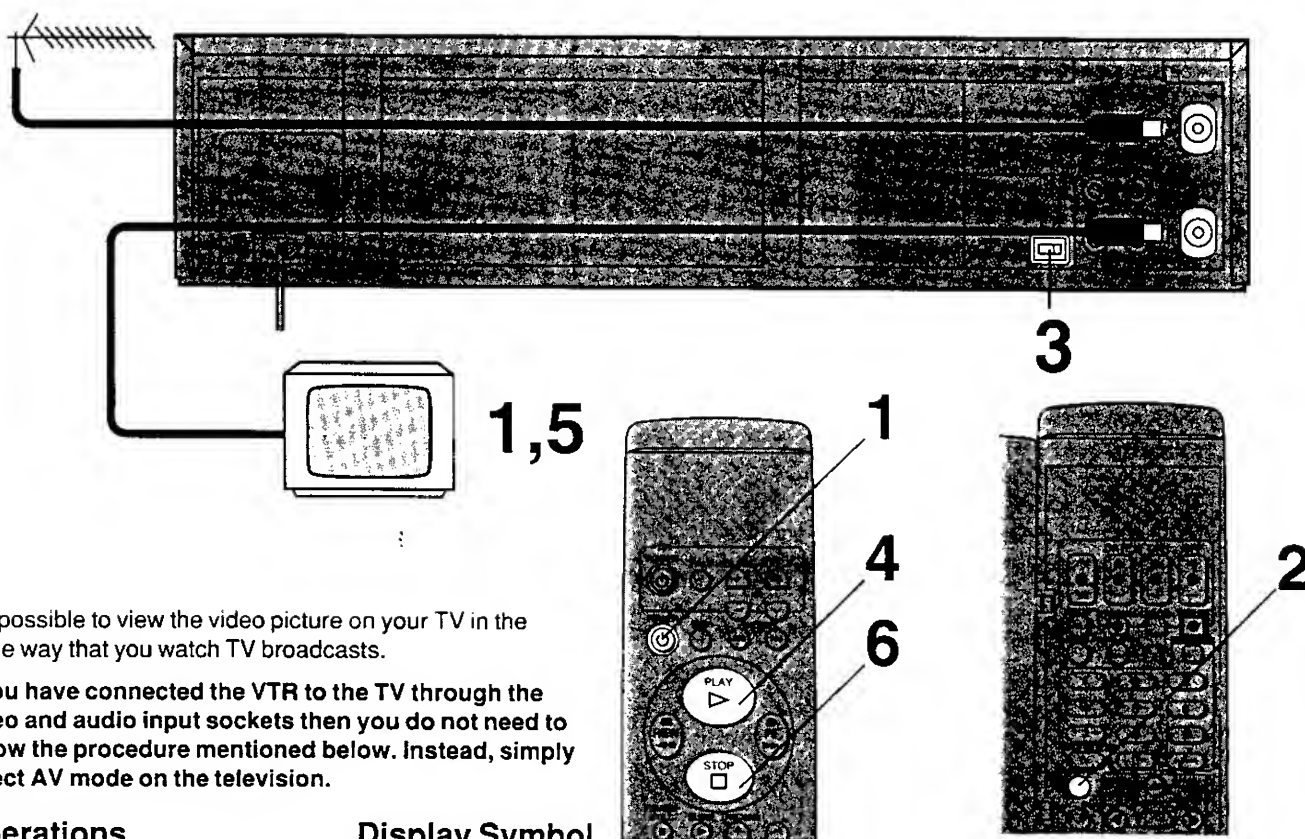
Set **TEST SIGNAL** to OFF.

#### Note:

The test signal is transmitted on video channel 37.

If you are encountering interference from a TV broadcast on this video channel, you may readjust to another free channel (31–43) by using the **CH ADJ.** screw which is located on the rear of the VTR.

Please note that if the **CH ADJ.** screw is used then you will have to retune your TV to the test signal as in item 2 to 4 above.







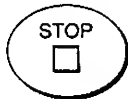


It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the video and audio input sockets then you do not need to follow the procedure mentioned below. Instead, simply select AV mode on the television.

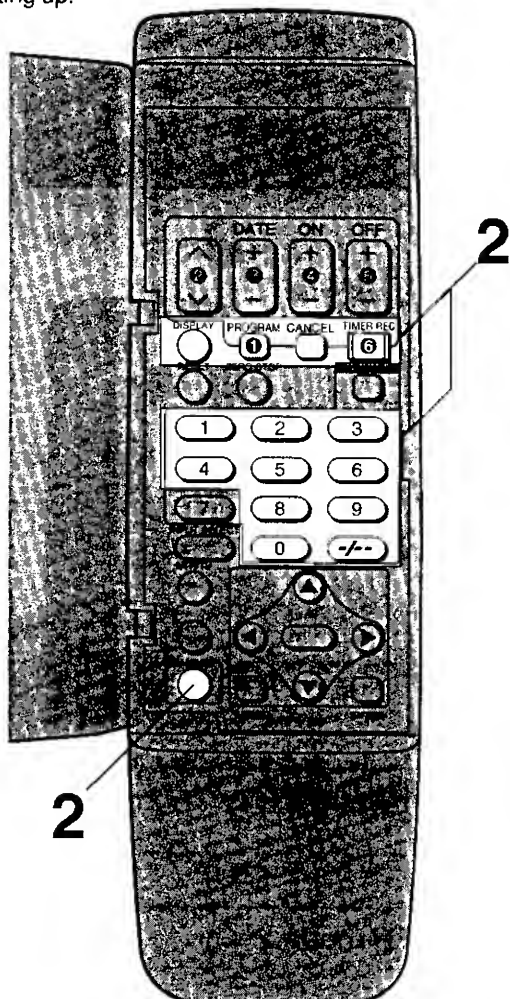
# Operations

## Display Symbol

1			Turn on the TV and VTR.
2			Select the VTR mode.
3			Select the video playback channel which is not occupied with any TV station. H: Channel 3 L: Channel 2
4			Insert a <b>pre-recorded</b> cassette tape and press <b>PLAY</b> .
5			Select a programme number on the TV set which you wish to use as the video viewing channel. Then tune in the TV to the picture from the cassette tape currently playing.
6			Stop the playback.

# Setting the Remote Controller for Operation of your TV

You can operate some manufacturer of TVs (see following table) using the supplied Remote Controller after this setting up.



## Preparation

Install the batteries in the remote controller. See page 7.

## Operations

- 1** Turn on the TV.
- 2** Press corresponding operation button to your TV manufacturer (see following table) while keeping **TV SELECT** pressed.
  - If setting is correct, TV will be turned off automatically.

TV Manufacturer	Operation Button
Panasonic/National	TV SELECT + DISPLAY
	TV SELECT + PROGRAM <b>1</b>
	TV SELECT + CANCEL
	TV SELECT + TIMER REC <b>6</b>
SONY	TV SELECT + <b>1</b>
TOSHIBA	TV SELECT + <b>2</b>
JVC	TV SELECT + <b>3</b>
HITACHI	TV SELECT + <b>4</b>
MITSUBISHI	TV SELECT + <b>5</b>
	TV SELECT + <b>6</b>
SHARP	TV SELECT + <b>8</b>
PHILIPS	TV SELECT + <b>9</b>
NEC	TV SELECT + <b>0</b>
SANYO	TV SELECT + <b>-/-</b>

### When the TV manufacturer is Panasonic/National or MITSUBISHI:

When the TV's power is turned off in step 2 above, turn it back on and adjust the TV's volume using this remote controller. The volume can be adjusted if the operation button matches the manufacturer of TV.

If it is not possible to adjust the TV's volume, try pressing the other operation button to match the manufacturer of TV again until the volume can be adjusted.

### Note:

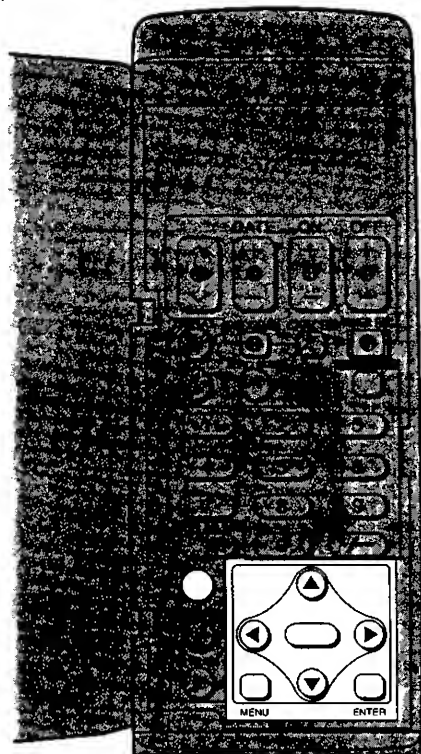
Some TV models cannot be operated using this remote controller.

# Language Setting of On Screen Display

Setting the Remote Controller  
for Operation of your TV  
Language Setting of On Screen Display

## Preparations

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.
- Press **VTR/TV** to select the VTR mode.  
(Only for NV-SD250EA.)



## To select the Desired Language

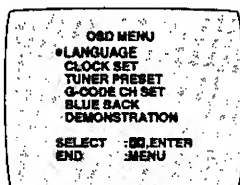
Select one of the two languages displayed: English and Russian.

- 1 Press **MENU**.

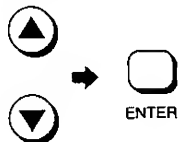


MENU

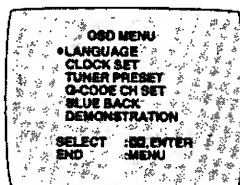
### On Screen Display



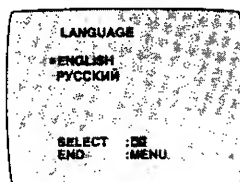
- 2 Select **LANGUAGE**.



ENTER



- 3 Select the desired language.



- 4 Press **MENU** twice.



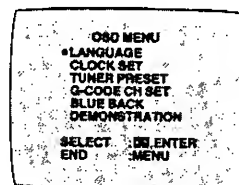
MENU

## To View a Demonstration

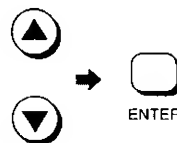
- 1 Press **MENU**.



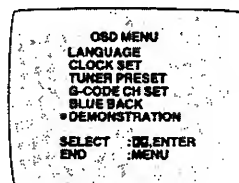
MENU



- 2 Select **DEMONSTRATION**.



ENTER



- During Demonstration mode, all the On Screen Displays are displayed one after the other at about five second intervals.

- 3 Press **MENU** to stop the Demonstration.



MENU

### Note:

The Menu Screen has a blue background. However, if there is no signal input during AV is selected, the Menu Screen may change to black and white when **MENU** is pressed. This does not indicate a malfunction. If this happens, either input a signal or select other programme position.

# Setting the Clock of the VTR

The built-in clock is used to activate the timer for automatic recording and must be set to the correct time.

The built-in digital clock employs the 24-hour system.

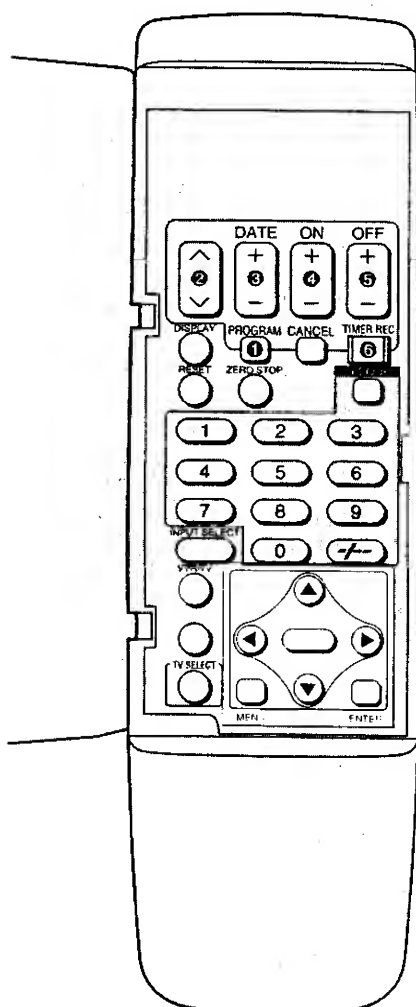
## For Example:

Date; 16th, October, 1999

Time; 20:15

## Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.
- Press **VTR/TV** to select the VTR mode. (Only for NV-SD250EA.)



## Operations

## On Screen Display

1



MENU

OSD MENU  
•LANGUAGE  
•CLOCK SET  
•TUNER PRESET  
•G-CODE CH SET  
•BLUE BACK  
•DEMONSTRATION  
SELECT : [ ] ENTER  
END : MENU

Press **MENU**.

2



ENTER

OSD MENU  
•LANGUAGE  
•CLOCK SET  
•TUNER PRESET  
•G-CODE CH SET  
•BLUE BACK  
•DEMONSTRATION  
SELECT : [ ] ENTER  
END : MENU

Select **CLOCK SET**.

3

Set each item by pressing **▲** or **▼** and **▶**.

CLOCK SET  
Y M D H:M  
1999 1 1 0:00  
SELECT: [ ] -/+ [ ]  
START: MENU

Set Year "1999".

CLOCK SET  
Y M D H:M  
1999 10 1 0:00  
SELECT: [ ] -/+ [ ]  
START: MENU

Set Month "10".

CLOCK SET  
Y M D H:M  
1999 10 16 0:00  
SELECT: [ ] -/+ [ ]  
START: MENU

Set Date "16".

CLOCK SET  
Y M D H:M  
1999 10 16 20:15  
SELECT: [ ] -/+ [ ]  
START: MENU

Set Time "20:15".

- When it is kept pressed, the indication changes in 30-minute steps.
- There is no need to press **▶**.

4



MENU

## Display Symbol



Press **MENU**.

- The clock will start.

## Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

### For example:

Resetting the clock to 12:00.00.

- 1 Select **CLOCK SET** from OSD menu and press **ENTER**.
- 2 When the current clock display on the VTR is between 11:58 to 12:01, press **MENU** as soon as you hear the 12:00.00 time signal. This resets the time to 12:00.00.

## Note:

The clock operates for at least 5 minutes by its backup system in the event of power failure.

# Storing TV Broadcasts into your VTR

Setting the Clock of the VTR  
Storing TV Broadcasts into your VTR

## Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 42 TV broadcast stations.

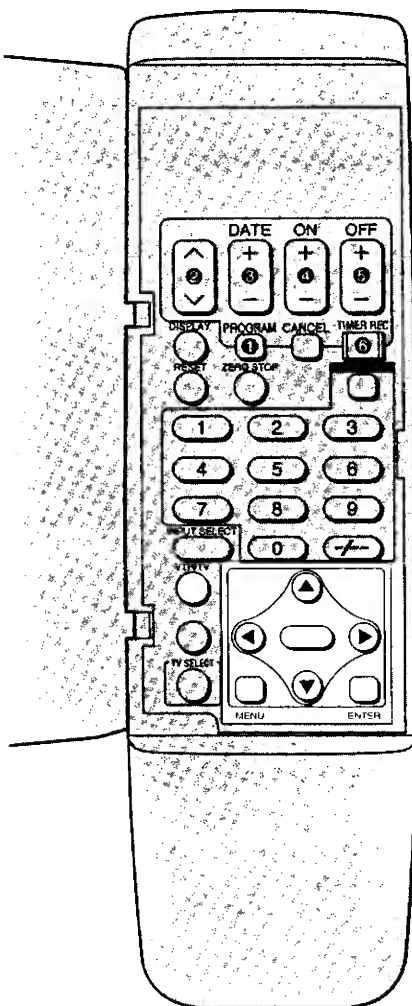
## Preparations

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except AV.
- Press **VTR/TV** to select the VTR mode.  
(Only for NV-SD250EA.)

## PRE-PROGRAMMED TV CHANNELS (NV-SD250A)

The local TV transmission channels 2, 7, 9 and 10 are factory-preset in this VTR. That is, if you can receive television broadcasts on VHF channels 2, 7, 9 and 10, these are already tuned on the programme positions with the matching numbers. However, it is possible to cancel these presets and tune the local TV broadcast channels on any desired programme positions. For alternative settings and tuning of additional TV broadcasts channels, follow the Tuning Operations.

## Auto Tuning Procedure



Operations	On Screen Display
<b>1</b> 	
<b>2</b> →	
<b>3</b>    	 

Press **MENU**.

Select **TUNER PRESET**.

Select **AUTO TUNE** and press **◀** or **▶**.

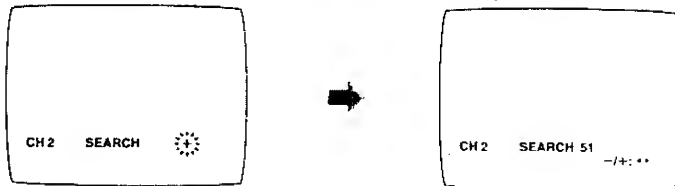
- When the Auto Tuning finished, On Screen Display disappears and programme position 1 is selected.

## Notes:

- The Auto Tuning is searching for TV station from VHF minimum to UHF maximum and memorizing the data for every programme position. The other programme positions are skipped.
- The Auto Tuning takes seven or more minutes to complete the search.
- If VTR is not correctly tuned by Auto Tuning, follow the procedure on next page.

## Manual Tuning Procedure

- 1 Press **MENU**.
- 2 Select **TUNER PRESET** by pressing **▲** or **▼** and **ENTER**.
- 3 Select **CH** by pressing **▲** or **▼** and then select the programme position by pressing **◀** or **▶**.
- 4 Confirm that **CLEAR** is set to **OFF**.
- 5 Select **SEARCH** by pressing **▲** or **▼** and then press **▶**.



- If the desired TV station is not be tuned, press **▶** again.
- Press **MENU** and repeat steps 3–5 for each programme position you want to tune to a station.

- 6 Press **MENU** three times.

## Channel Plan

	VHF		UHF
	VL	VH	
<b>NV-SD250A</b>	0–5	5A–12	21–69
<b>NV-SD250EA</b>	1–3	4–11	21–69

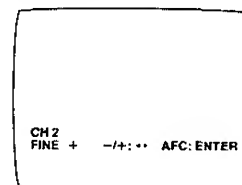
**NV-SD250A:**

Broadcast TV Channel	Position tuned on VTR
2 ABC	2
7 ATN	7
9 TCN	9
10 TEN	10
28 SBS	28

This table will be required when programming the G-Code.

## Fine Tuning Procedure

- 1 Press **MENU**.
- 2 Select **TUNER PRESET** by pressing **▲** or **▼** and **ENTER**.
- 3 Select **CH** by pressing **▲** or **▼** and then select the programme position by pressing **◀** or **▶**.
- 4 Select **FINE** by pressing **▲** or **▼**.
- 5 Press **◀** or **▶** to obtain the best tuning condition.



- To return the tuning to its former state, press **ENTER**.

- 6 Press **MENU**.

## Blanking of Unoccupied Programme positions

- 1 Press **MENU**.
- 2 Select **TUNER PRESET** by pressing **▲** or **▼** and **ENTER**.
- 3 Select **CH** by pressing **▲** or **▼** and then select the programme position by pressing **◀** or **▶**.
- 4 Select **CLEAR** by pressing **▲** or **▼**.
- 5 Select **ON** by pressing **◀** or **▶**.
  - Repeat steps 3–5 for another unoccupied programme positions to skip during the selection of the programme positions.
  - To cancel the blanking of a programme position, select that programme position and then select **CLEAR OFF**.
- 6 Press **MENU** twice.



# Preparations for G-Code Programming

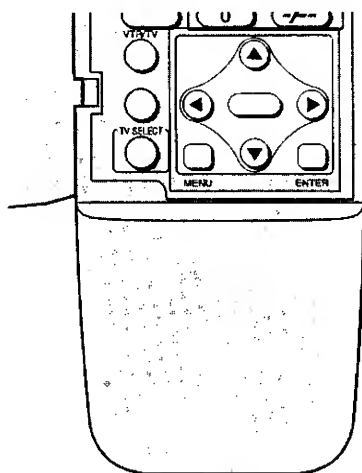
Storing TV Broadcasts into your VTR  
Preparations for G-Code Programming

Identification numbers must be set for G-Code programming. Simply proceed with the G-Code programming operation described on page 24, and the identification numbers of the TV stations concerned will be set automatically. This means that G-Code programming is possible even without performing the operation described on this page. However, you can follow the setting procedure described below if you wish to set the identification numbers of all the TV stations prior to actual programming.

"Identification numbers" refer to the numbers used for identifying the TV stations. The programme positions on the VTR receiving the TV stations are set in these identification numbers. Have a newspaper or magazine on hand which lists today's local TV station programmes and G-Code numbers.

## Preparations

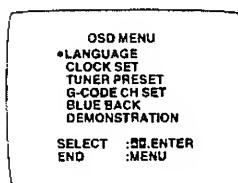
- Set the clock of the VTR. See page 14.
- Store TV broadcasts into your VTR. See pages 15 and 16.
- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.
- Press **VTR/TV** to select the VTR mode.  
(Only for NV-SD250EA.)



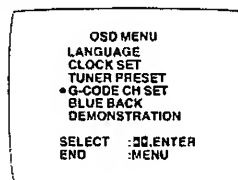
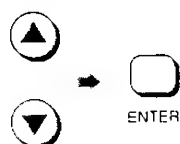
## Operations

## On Screen Display

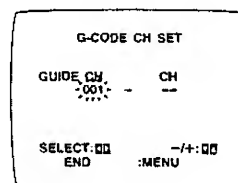
**1** Press **MENU**.



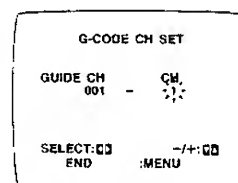
**2** Select **G-CODE CH SET**.



**3** Select the identification number (001–255).



**4** Press **◀** or **▶** and then select the programme position (1–42, AV).



- To set the other TV stations, press **◀** or **▶** and then repeat steps 3 and 4.

**5** Press **MENU** twice.



MENU

### Note:

To receive satellite stations, the satellite receiver must be connected to the VTR and programme position must be set depending on the type of the connection mode.

AV: When the satellite receiver is connected to the Audio/Video input sockets.

- When the satellite receiver is connected by means of the RF coaxial cable, set to a free programme position between 1 and 42.

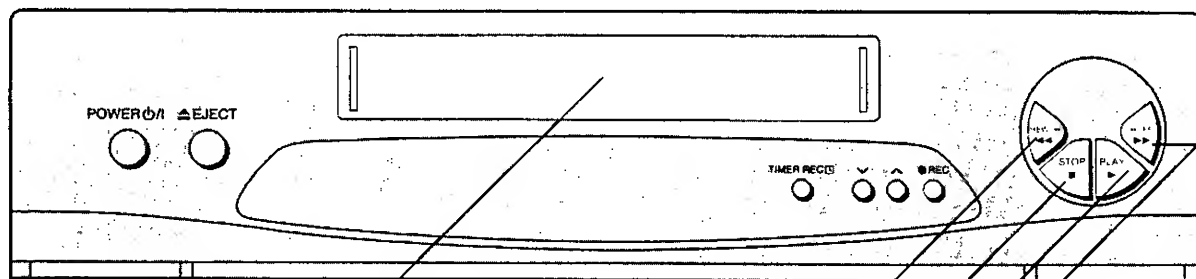
For Example: (NV-SD250A)

TV Station	Programme Position on VTR	Identification Number
ABC	2	002
ATN	7	007
TCN	9	009
TEN	10	010
SBS	28	028/001

For Example: (NV-SD250EA)

TV Station	Programme Position on VTR	Identification Number
TV ONE	1	001
CHANNEL 2	2	002
TV3	3	003
SKY TV MOVIES	4	004
SKY TV SPORTS	5	005
SKY TV NEWS	6	006
CTV	7	007
ACTION TV	8	008

# Playback



1

4 7 2 3

## Operations

## Display Symbols

1



Insert a recorded cassette tape.

2



Start viewing the picture.

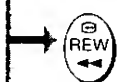
3



Search forward by tapping **FF**.

• To change back to normal playback, press **PLAY**.

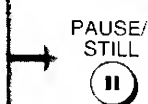
4



Search backward by tapping **REW**.

• To change back to normal playback, press **PLAY**.

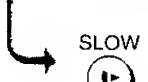
5



View a still picture.

• To continue the normal playback, press **PLAY** or **PAUSE/STILL**.

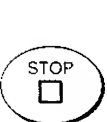
6



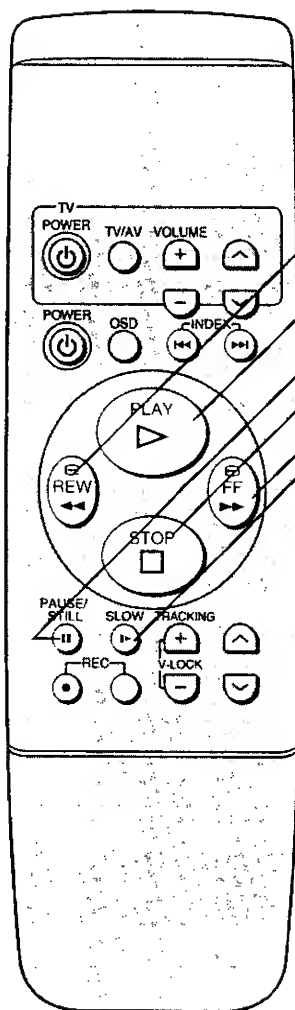
View the slow motion picture.

• To continue the normal playback, press **PLAY**.

7



Stop viewing the picture.

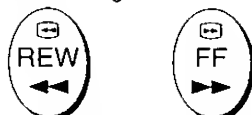


## Other Playback Functions

### To obtain High Speed Picture During Fast Forward or Rewind

Keep **FF** pressed during fast forward.

Keep **REW** pressed during rewind.



### To return to a Specified Scene

1 Press **RESET** to set the counter to 0:00.00.



2 After playback, press **ZERO STOP** in the stop mode.

- The tape will be rewound or fast forwarded to 0:00.00.



### To find the Beginning of Each Recording

For example:

Searching for the 2nd recorded segment in the forward direction.

Press **INDEX** >>>I twice.



- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press **INDEX** I<<<.
- Up to 20 index signals can be searched for in both directions.
- When the opposite **INDEX** button is pressed, the number shall be decreased till 1.
- The figure on the display is decremented by 1 each time an index signal is located.

### Recording Index Signals

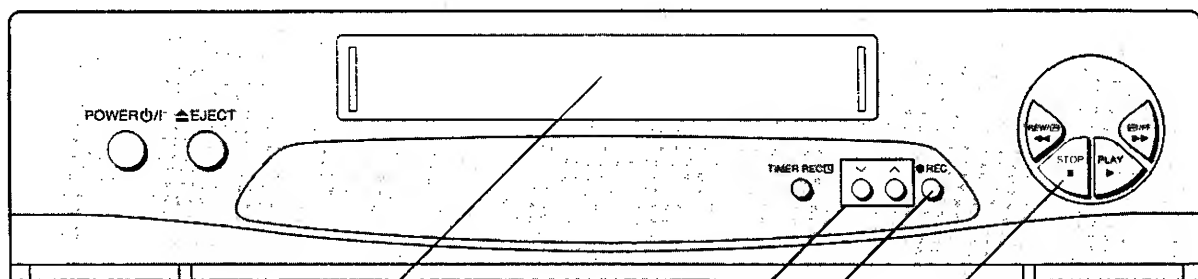
Index signals are recorded in following cases.

- When a recording is started by pressing **REC**.
- When **REC** is pressed during recording.
- When timer recording is activated.

### Notes:

- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.
- The **INDEX** search function can only work correctly, if the index signals are spaced at least 3 minutes apart in the SP mode.

# Manual Recording

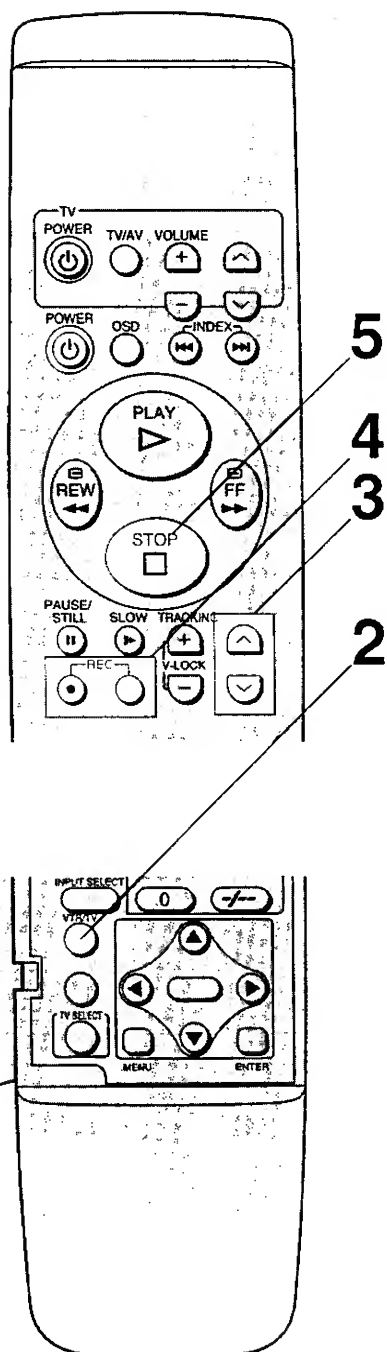


1

3

4

5



## Operations

## Display Symbols

1



Insert a cassette tape.  
• If it has already been inserted, press  
**POWER** to turn the VTR on.

2



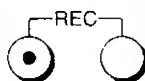
Select the VTR mode.  
(Only for NV-SD250EA.)

3



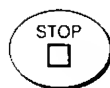
Select TV station.

4



Start recording.

5



Stop recording.

### To interrupt Recording

Press **PAUSE/STILL** during recording.  
Press again to continue recording.



### To record One TV Programme while Viewing Another Programme

- 1 Refer to the manual recording operations steps 1 to 4.
- 2 Press **VTR/TV** to select the TV mode.  
(Only for NV-SD250EA.)
- 3 Select the TV programme on your TV set you wish to view at the present time.

#### Notes:

- When a video cassette with a broken off tab is inserted, the "⏏" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes. Revert back to the stop mode.

# Timer Recording

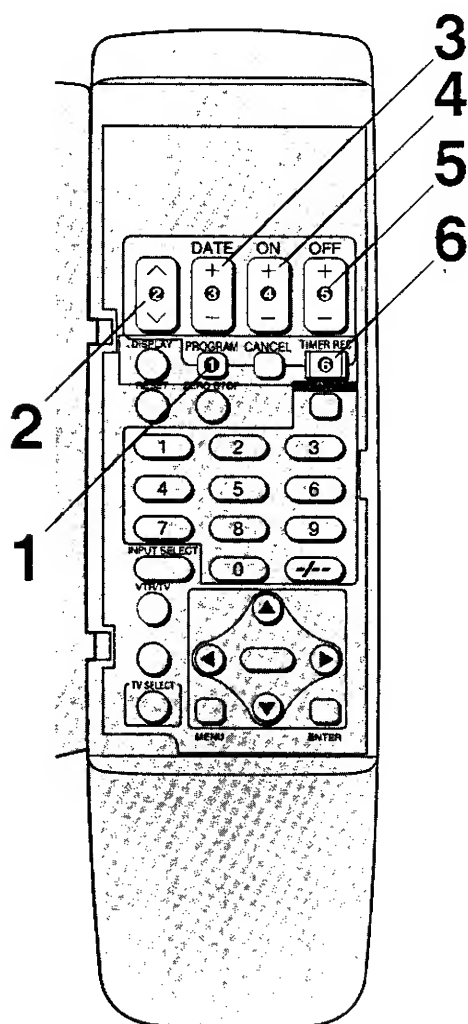
Up to 8 timer programmes can be recorded up to one month in advance by setting the timer, including weekly and daily programmes.

## Preparations

- Insert a cassette tape with an intact erasure prevention tab.
- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.
- Press **VTR/TV** to select the VTR mode.  
(Only for NV-SD250EA.)

## For Example:

Timer programme number; 1  
 Programme position (channel): 2  
 Date; 27th, October  
 Starting time; 20:02  
 Ending time; 21:30  
 (Present date; 16th, October)



## Operations

## On Screen Display

### 1 Select Timer Programme number "1".

PROGRAM

①

CH	DATE	ON	OFF	SP
1	---	---	---	SP
2	---	---	---	---
3	---	---	---	---
4	---	---	---	---
5	---	---	---	---
6	---	---	---	---
7	---	---	---	---
8	---	---	---	---
9	---	---	---	---
10	---	---	---	---
SELECT	---	---	---	---

### 2 Set Programme position (channel) "2".



CH	DATE	ON	OFF	SP
2	---	---	---	SP
1	---	---	---	---
3	---	---	---	---
4	---	---	---	---
5	---	---	---	---
6	---	---	---	---
7	---	---	---	---
8	---	---	---	---
9	---	---	---	---
10	---	---	---	---
SELECT	---	---	---	---

### 3 Set Date "27".



CH	DATE	ON	OFF	SP
2	27WE	---	---	SP
1	---	---	---	---
3	---	---	---	---
4	---	---	---	---
5	---	---	---	---
6	---	---	---	---
7	---	---	---	---
8	---	---	---	---
9	---	---	---	---
10	---	---	---	---
SELECT	---	---	---	---

### 4 Set Starting time "20:02".



CH	DATE	ON	OFF	SP
2	27WE	20:02	---	SP
1	---	---	---	---
3	---	---	---	---
4	---	---	---	---
5	---	---	---	---
6	---	---	---	---
7	---	---	---	---
8	---	---	---	---
9	---	---	---	---
10	---	---	---	---
SELECT	---	---	---	---

- When it is kept pressed, the indication changes in 30-minute steps.

### 5 Set Ending time "21:30".



CH	DATE	ON	OFF	SP
2	27WE	20:02	21:30	SP
1	---	---	---	---
3	---	---	---	---
4	---	---	---	---
5	---	---	---	---
6	---	---	---	---
7	---	---	---	---
8	---	---	---	---
9	---	---	---	---
10	---	---	---	---
SELECT	---	---	---	---

### 6 To activate timer recording, press **TIMER REC**.

TIMER REC

⑥



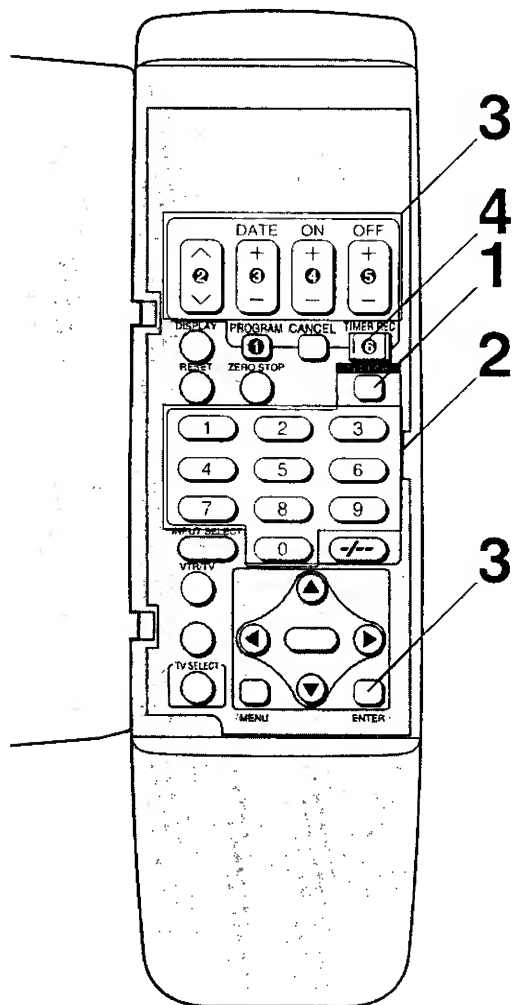
## G-Code Programming

Programming is now easier than ever: simply enter the G-Code number provided in the programme schedule column carried by newspapers and magazines.

G-Code numbers are numbers which are assigned to each programme listed in the TV programme schedule carried in newspapers and TV guides. When these numbers are entered, the numbers are converted into the actual programming.

### Preparations

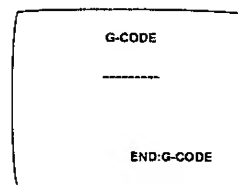
- Insert a cassette tape with an intact erasure prevention tab.
- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.
- Press **VTR/TV** to select the VTR mode.  
(Only for NV-SD250EA.)



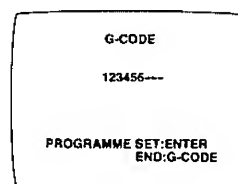
### Operations

### On Screen Display

#### 1 Press G-CODE.

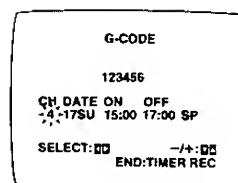


#### 2 Enter a G-Code number. Example: 123456

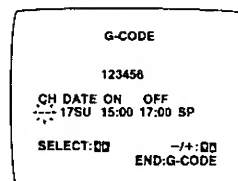


- If you have entered the wrong number, press **CANCEL** and then enter the proper number.

#### 3 Press ENTER.



- Confirm that the number corresponds to the right programme. If the display looks like this:



select the programme position of your VTR which receives the TV station you entered at step 2 using button **2** and then press **ENTER**.

- To make any corrections, use buttons **3-5** as the same way on page 22.

#### 4 Press TIMER REC.



#### Notes:

- When the G-Code number is used for programming, the recording time may be slightly longer than the actual programme time.
- Repeat steps 2 and 3 if "PROGRAMME IS INCOMPLETE." appears.
- When programming two or more programmes, repeat steps 1-3 before pressing **TIMER REC**.
- The procedures for checking and cancelling a timer programme are the same as on page 23.



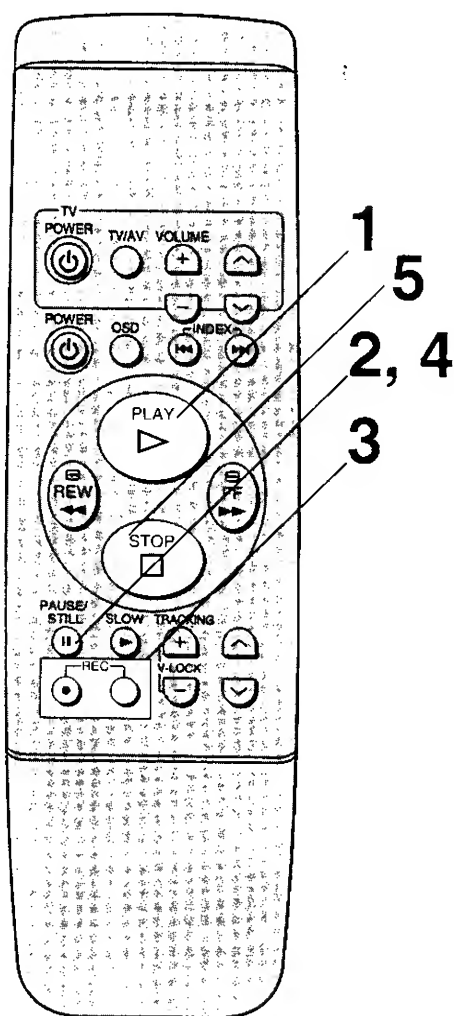
## Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

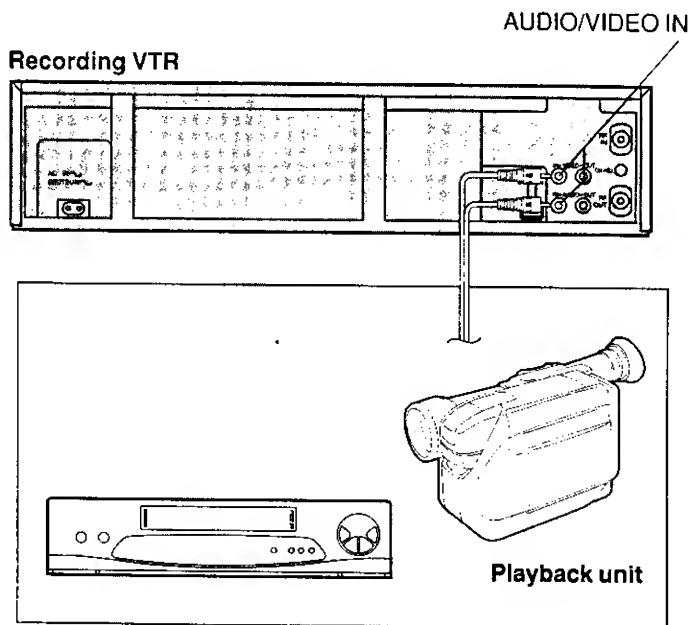
A new scene can be added to the end of a previous one.

### Preparations

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set AV.



Recording VTR



### Operations

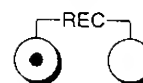
- 1 Search for the end of the previous recording.



- 2 Press **PAUSE/STILL**.



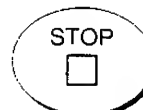
- 3 Press **REC** to switch the VTR from the pause mode to the recording standby mode.



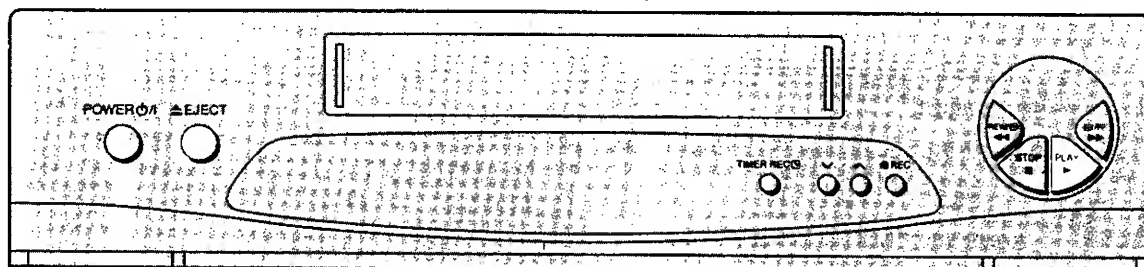
- 4 Start the new recording by pressing **PAUSE/STILL** again.



- 5 Press **STOP** to stop recording.



# Other Functions



## Other Automatic Functions

### Automatic playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

### VTR-off playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

### Automatic rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

### Automatic switching off and ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

### NTSC Playback

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.

#### A note about NTSC playback on PAL TV function

On some TVs, the playback picture may roll up or down: adjust this using the V-HOLD control on the TV. TVs not equipped with a V-HOLD control cannot correct this condition. The playback picture will shrink vertically, and black bars will appear both on the top and bottom of the screen. This is not an indication of a malfunction.

- During Cue, Review, Still or Slow playback, the picture may not be in colour.
- Recording in the NTSC system is not possible with this VTR.
- This function is designed only to allow the playback of tapes recorded by NTSC signals on a PAL system TV. The NTSC signal is not completely converted to a PAL signal. For this reason, images played back by this function cannot be recorded on another VTR.

## Blue Background Function

### Preparations

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.
- Press **VTR/TV** to select the VTR mode.

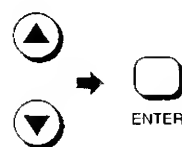
(Only for NV-SD250EA.)

When **BLUE BACK** is **ON**, the screen will always have a blue background when no signal is received or the received signal is very weak.

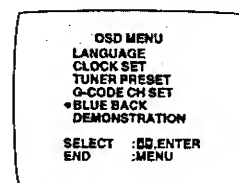
- 1 Press **MENU**.



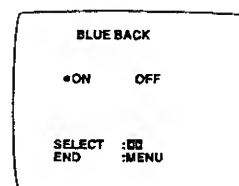
- 2 Select **BLUE BACK**.



#### On Screen Display



- 3 Select **ON**.



- When **BLUE BACK** is **OFF**, the blue background function does not work.
- It is not possible to record the blue picture of the blue background function.

### After Setting is selected

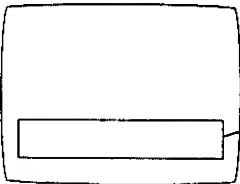
Press **MENU** twice to make On Screen Display disappear.



# Before Requesting Service

Other Functions  
Before Requesting Service

Before requesting service, check the following points once again.

Message of On Screen Display		
 <p>Message of On Screen Display is displayed.</p>		
MESSAGE	CAUSE	REMEDY
PLEASE PUT IN A VIDEO CASSETTE	<b>REC</b> is pressed without cassette.	Put in a video cassette.
PLEASE STOP THE TAPE.	<b>TUNER PRESET</b> is selected during playback.	Stop the tape.
PLEASE SET THE CLOCK	<b>PROGRAM</b> is pressed when the clock is not set.	Set the clock.
PLEASE USE A CASSETTE WITH TAB	<b>REC</b> is pressed without tab of Cassette.	Use a cassette with tab.
NO TIMER RECORDING HAS BEEN SET	<b>TIMER REC</b> is pressed with no timer programmes.	Set timer recording.
TIMER PROGRAMMES ARE FULL	<b>G-CODE</b> is pressed when 8 programmes have been already set.	Cancel unnecessary programme.
VTR IS IN THE TIMER STANDBY MODE.	<b>POWER</b> is pressed during timer standby mode.	Press <b>TIMER REC</b> to release from timer standby mode.
DEW FORMED IN THE VTR.*	Dew forms.	Wait until the message disappears.

\*Only for NV-SD250A.

Self Test Indication		
<p>This VTR has a self-diagnosis and display function. If the VTR detects trouble during installation or during use, the following indications automatically appear in the VTR display. Indications are displayed in the form of a single English letter plus two numbers such as [H01].</p>		
INDICATION	CAUSE	REMEDY
U 1 0*	Dew forms.	Wait until the indication disappears.
H □ □	Some trouble has occurred. (Numbers following H and F differ according to the status of the VTR.)	Consult your dealer for further advice.
F □ □		

\*Only for NV-SD250A.

VTR will not operate correctly			
SYMPTOM	CAUSE	REMEDY	CHECKED
VTR display is not illuminated.	Mains lead is not connected.	Reconnect mains lead to VTR.	
VTR display is illuminated but VTR will not operate.	VTR is in timer mode.	Press <b>TIMER REC</b> to operate VTR manually.	
	Safety devices are operating.	Disconnect mains lead and wait for 1 minute. Reconnect mains supply and check functions.	
	Condensation may have formed.	Do not operate VTR for 1 hour.	
A language which you do not understand appears on the TV screen.	The Language Setting is set to a language which you do not understand.	Press <b>MENU</b> and then <b>ENTER</b> , and use ▲ or ▼ to select a language you understand. Then press <b>MENU</b> twice. See page 13.	

Playback will not operate correctly			
SYMPTOM	CAUSE	REMEDY	CHECKED
Picture noisy or not in colour. Horizontal bars or lines run down the screen.	Tracking is not correct.	Adjust the tracking. See page 6.	
	Video heads are clogged or worn.	Consult your dealer for further advice.	

Recording will not operate correctly			
SYMPTOM	CAUSE	REMEDY	CHECKED
"00" indication flashes whenever recording is attempted.	Erase prevention tab on cassette is broken off.	Use tape with intact erase prevention tab, or cover tab hole with adhesive tape, if original recording is no longer required.	
Picture is recorded with noise or blank screen.	Aerial or aerial lead is defective.	Check aerial connection to VTR. See page 9. Check your normal TV picture. If there is no picture, check your aerial.	
	VTR is not correctly tuned.	Re-tune VTR. See page 15.	
	AV is selected.	Select the required TV programme.	
Timer recording cannot be performed.	Clock or calendar is incorrectly set.	Check clock and calendar. Set to present time. (Note this is a 24 hour clock.) See page 14.	
	Recording start or end time setting is incorrect.	Set recording start and end time correctly.	
	VTR is not set for timer recording.	Press <b>TIMER REC</b> after programming for timer recording.	
AV external recordings cannot be made.	AV is not selected.	Select AV.	
	External AV connections are incorrect.	Check that connections for external video and audio source are correct. See page 25.	

Remote controller will not work correctly			
SYMPTOM	CAUSE	REMEDY	CHECKED
Remote controller does not operate correctly.	Remote controller transmitter beam is not reaching VTR.	Ensure that remote controller is being pointed at VTR and that transmitter beam is not obstructed.	
	Distance is too far.	Use remote controller within 7 m of VTR. If this range is not possible, replace batteries.	
	Batteries are exhausted.	Replace batteries. Note precaution for replacement on page 7.	
	Batteries are incorrectly fitted with (+/-) reversed.	Fit batteries correctly as shown on page 7.	

# Precautions

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Please read these cautions before you operate this VTR.

---

## Avoid Sudden Changes in Temperature

If the VTR is suddenly moved from a cold place to a warm place, condensation may form on the tape and inside the VTR.

---

## Humidity and Dust

Avoid places where there is high humidity or much dust, which may cause damage to internal parts.

---

## Do Not Obstruct the Ventilation Holes

The ventilation holes prevent abnormal increase in temperature. Do not block or cover these holes. Especially avoid covering the holes with soft materials such as cloth or paper.

---

## Keep away from High Temperature

Keep the VTR away from extreme direct heat such as direct sunlight, heating radiators, or closed automobiles.

---

## Keep Magnets away

Never bring a magnet or magnetized object near the VTR because it will adversely affect the performance of the VTR.

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## No Fingers or Other Objects Inside

Touching internal parts of this VTR is dangerous, and may cause serious damage to the VTR. Do not attempt to disassemble the VTR. There are no user serviceable parts inside.

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## Keep Water away

Keep the VTR away from flower vases, tubs, sinks, etc. CAUTION: If liquids are spilled into the VTR, serious damage could occur. If you spill any liquid into the VTR, consult qualified service personnel.

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## Lightning

To avoid damage by lightning, disconnect the aerial plug from the VTR.

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## Cleaning the VTR

Wipe the VTR with a clean, dry cloth. Never use cleaning fluid, or other chemicals. And do not use compressed air to remove dust.

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## Stacking

Place the VTR in a horizontal position, and do not place anything heavy on it.

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## Video Head Clogging

The video heads place picture signals on the tape during recording and read picture signals from the tape during playback and they are, therefore, of critical importance for the picture quality. If the VTR is used over extremely long periods of time, these heads may become dirty and clogged. In such a case, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. This is the case, for example, during the playback of a tape, the sound is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such a symptom case occurs have the recorder checked by qualified service personnel.

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## If Dew Condensation Forms in the VTR

### Condensation may form in the VTR if:

- The VTR is in a room where the heater has just been turned on.
- The VTR is in a room with steam or high humidity.
- The VTR is brought from cold surroundings into a well-heated room.
- The VTR is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.

### Model NV-SD250A;

When dew forms in the VTR, the Dew Indicator "d" on the Display will flash on and off and all the function buttons are made non-operational to protect the tape and the video heads. When the Dew Indicator flashes, wait until this indicator disappears.

- If dew condensation forms inside the VTR while the POWER Switch is off, it will turn on automatically and the Dew Indicator will flash on and off. As soon as the dew condensation has been dissolved, the VTR will turn itself off again.

### Model NV-SD250EA;

This model does not incorporate a dew sensor.

Do not operate the VTR for at least 1 hour if any of the above conditions occur.

# Specifications

Precautions  
Specifications

## NV-SD250A/EA

<b>Power Source:</b>	240 V AC 50–60 Hz (NV-SD250A) 230 V AC 50–60 Hz (NV-SD250EA)
<b>Power Consumption:</b>	Approx. 19 watts

<b>Video Recording System:</b>	2 rotary heads, helical scanning system
<b>Video Heads:</b>	2 heads
<b>Tape Speed:</b>	23.39 mm/sec.
<b>Tape Format:</b>	VHS tape
<b>Record/Playback Time:</b>	240 min. with NV-E240

### VIDEO

<b>Television System:</b>	CCIR; 625 lines, 50 fields, PAL colour signal
<b>Modulation System:</b>	Luminance; FM azimuth recording Colour signal; converted subcarrier phase shift recording
<b>Input Level:</b>	VIDEO IN (PHONO); 1.0 Vp-p,
<b>Output Level:</b>	VIDEO OUT (PHONO); 1.0 Vp-p, RF Modulated; UHF channel 37±6 (NV-SD250A), VHF channel 2 or 3 (NV-SD250EA),

75 ohm, terminated  
75 ohm, terminated  
75 ohm  
75 ohm

### AUDIO

<b>Input Level:</b>	AUDIO IN (PHONO);	–10 dBV,
<b>Output Level:</b>	AUDIO OUT (PHONO);	–6 dBV,
<b>Audio Track:</b>	1 track (Normal-mono only)	

more than 50 kohm  
less than 1 kohm

<b>Video Horizontal Resolution:</b>	Colour; more than 240 lines
<b>Signal-to-Noise Ratio:</b>	Video; more than 43 dB Audio; more than 43 dB

<b>Audio Frequency Response:</b>	80 Hz–10 kHz
<b>Operating Temperature:</b>	5°C–40°C
<b>Operating Humidity:</b>	35%–80%
<b>Weight:</b>	4.2 kg
<b>Dimensions:</b>	430 (W)×99.9 (H)×295 (D) mm
<b>Standard Accessories:</b>	1 pc. RF Coaxial Cable 1 pc. Remote Controller 2 pcs. "R6" size batteries 1 pc. AC Mains Lead

Weight and dimensions shown are approximate.  
Specifications are subject to change without notice.